

# MANTA

# DVD-011

MODEL

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## SERVICE MANUAL

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# GVT AVIO:2006E VER2.1,EUROPE TYPE.

DMN8602MK AV I/O Board WITH 7.1CH OUT,DURL SCART(SIMPLE)  
DESIGNED FOR CONTEL (EUROPE TYPE with CANAL+)  
THE LAST UPDATED DATE:2004/07/18  
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## REVISION HISTORY

VER	REV	DATE	DESCRIPTION
0.0	1	05/17/2004	Initial Draft
0.1	2	05/28/2004	REMOVE RTC.GND.FB160.FB173 ETC RENAME W1 TO FB10,J21 TO J8,J9 TO J7. CHANGE 8776 CONTROL MODE FORM TWO WIRE TO SPI ADD U1(MM1225) TO SWITCH SCART CVBS IN WITH TV_CVBS_IN.SO THE SCART INTERFACE IS COMPATIBLE WITH 8600 MODE.
		06/01/2004	ADD FMUTE SIGNAL J14 FORM FRONT PANEL
		06/07/2004	RECONNECT THE AUDIO CODEC POWER (A5V with 78105 & D5V)
		06/10/2004	REDIFINE THE REAR PANEL INTERFACE
1.0	3	06/15/2004	ADD DURL SCART CIRCUIT,REMOVE J6,J8,J9,J12,J14,CHANGE J10,J11
2.0	4	06/17/2004	ADD SCART CANAL+ INTERFACE
		06/30/2004	MODIFY SCART CANAL+ INTERFACE

## SCHEMATICS CONTENTS

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Title GVT\_AVIO 2006C SCHEMATIC

Size C Document Number <Doc>

Date Monday, September 13, 2004 Sheet 1 of 6 Rev A0

THORIUM REV-A2B2

Layout---THORIUM-A2B2

ES6820/22/26 + DV342/502W/DL3F/KHM310 + OUTPUT

Background

This DVD design is based on ESS ES6820/22/26 single chip DVD mpeg and servo processor. The ES6820/22/26 is built upon ESS proven Programmable Multimedia Processor architecture with integrated servo DSP. A complete DVD design using ES6603 RF-Amp can support all major popular optical pickup heads. With ES68xx unify memory architecture, the whole system memory is reduced to a minimum. ES6820/22/26 provides the best price performance DVD solution in the industry and include the latest MPEG4/DivX playback capability.  
andy\_ho@esstech.com.hk

System Clock Requirement

ES6820/22/26 require a 27MHz clock to operate. This 27MHz can either be generated externally and feed into pin 193 and pin 195 or thru a 27MHz crystal attached to pin 193 and 194. This 27Mhz will be used for all video processing reference. In addition, internal multiplier will generate a much higher operating frequency for the internal RISC+DSP code to operate. Audio clock is generated from ES6820/22/26 by its internal PLL circuitry.

SDRAM Usage

ES6820/22/26 supports different SDRAM configuration from 1Mx16, 4Mx16 to 8Mx16 SDRAM. The basic requirement can go as low to 2 pcs of 1Mx16 SDRAM with standard feature set. You can also make use of 8Mx16 SDRAM to achieve longer ESP antishock time for portable application.

System Configuration

CHIP	FUNCTION
ES6820/22/26	Single chip processor that handles all system control, DVD decoding and servo control.
32/64MBit SDRAM	Data storage and frame buffer using either 1 pc of 4Mx16 SDRAM or 2 pcs of 1Mx16 SDRAM
4/8Mbit EPROM/FLASH	Program storage using either 4Mbit Flash or 8Mbit Flash
24C01 SERIAL EE	System setup configuration storage

LCSx#	FUNCTION
LCS0#	SPARE
LCS1#	I/O expand
LCS2#	SPARE
LCS3#	ROM/FLASH

AUXx	FUNCTION
AUX0	I2C DATA
AUX1	I2C CLOCK
AUX2	VFD DATA
AUX3	AUDIO BUFFER CONTROL
AUX4	IR/SPARE
AUX5	AMP_PWR/DFCT
AUX6	VFD CS#
AUX7	VFD CLK/IR

AUXxx	FUNCTION
12	RXD1
13	TXD1
16	HSYNC
17	VSYNC
30	SPARE
31	SPARE
32	SPARE/VFDCLK
33	SPARE
34	SPARE
35	SPARE
36	SPARE
37	SPARE

EAUXxx	FUNCTION
00	SCARTCTL0
01	SCARTCTL1
02	GND
03	SCARTCTL2

Revision History

Rev-A1

Base on SMITH-A2B2'S design

Rev-A2

- 1.Add R202,R203,R204,R205 for B,D swap option.
- 2.Add pull low resistor R206 to AMPSTBY.
- 3.Delete the connection from CE to FOCUS;delete the connection from RFENV to SLED.
- 4.Change R59,R62,Q7,Q8,Q9 to open;change R60 to 0 ohm.
- 5.Revise the pickup configure table,add R43,R51,RR6,RR8 option,only 502W is confirmed.
- 6.Change R201 to open;add a pull low resistor option to HOMESW.
- 7.Change R77 to 6.8K.
- 8.Modify the two channel circuit(add 74HCT174),modify the filter parameter.
- 9.Change DV342 to default pickup.
- 10.Change R63 from 33K to 56K;short D9;R206 from 4.7K to 3.3K.
- 11.Change R45 and R46 from 4.7K to open.
- 12.Change C3,C4 from 27pf to 22pf.
- 13.Change U24 to 74ACT174.

Rev-A3

- 1.Short and delete D9.
- 2.Delete R200.
- 3.Change driver from AM5869S to AM5888S.
- 4.Move C223 to C140,move C224 to C150,move C225 to C160,move C226 to C168.
- 5.Change C216,C217,C159,C167 to NPO type capacitor.
- 6.Change R77 from 6.8K to 9.1K.

Rev-A4

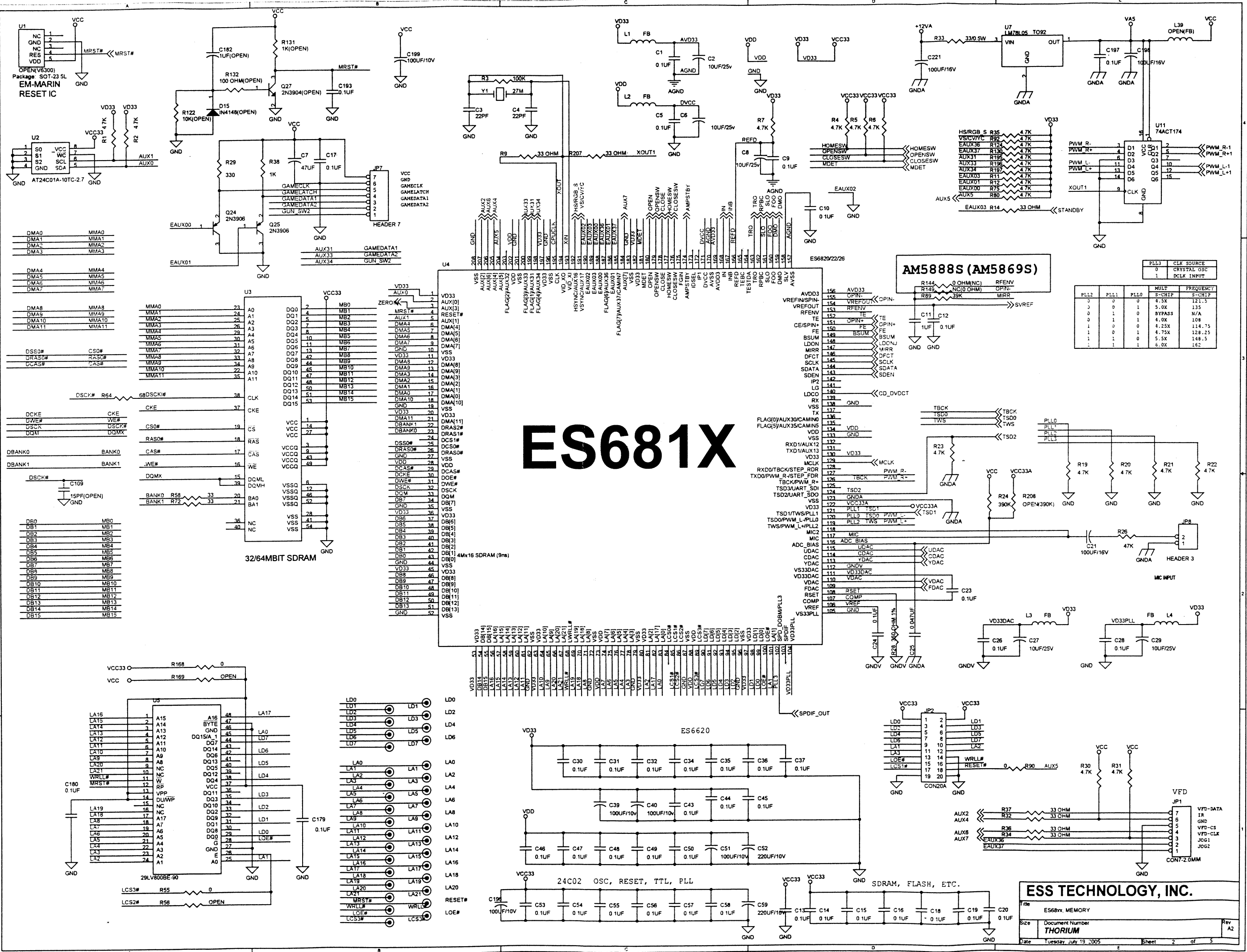
- 1.Add test port
- 2.Place output socket
- 3.WM8766.17pin & WM8766.28pin change 3.3v to A5V of power

Rev-A5

- 1.Change C62,C66 to 10NF,C60,C61 to 33NF,R45,R46 to 15K.

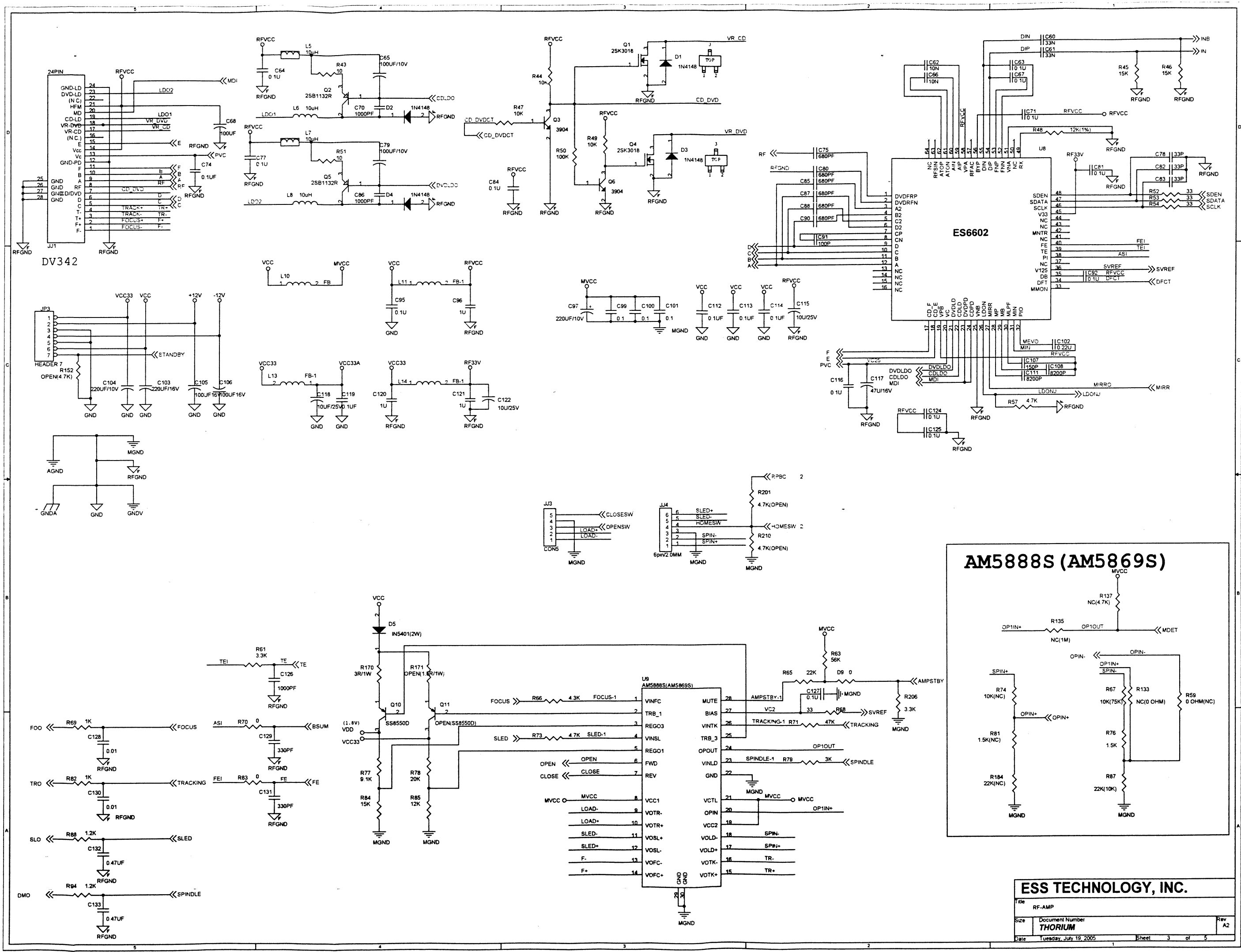
ESS TECHNOLOGY, INC.

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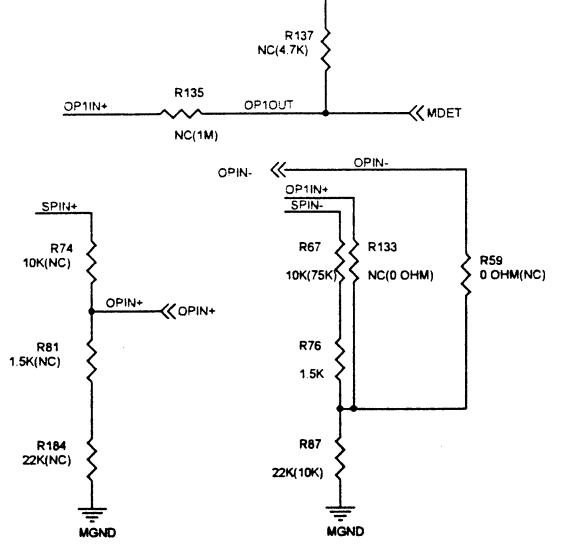


# ES681X

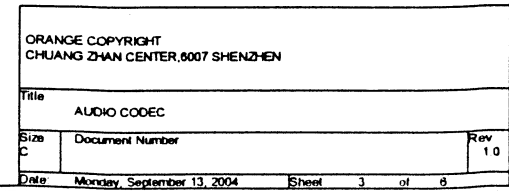
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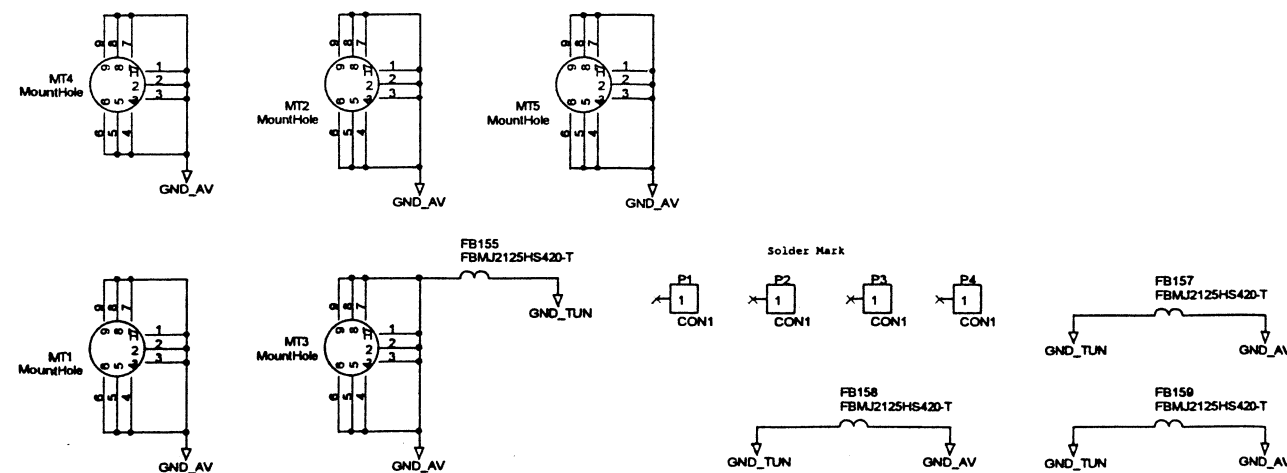
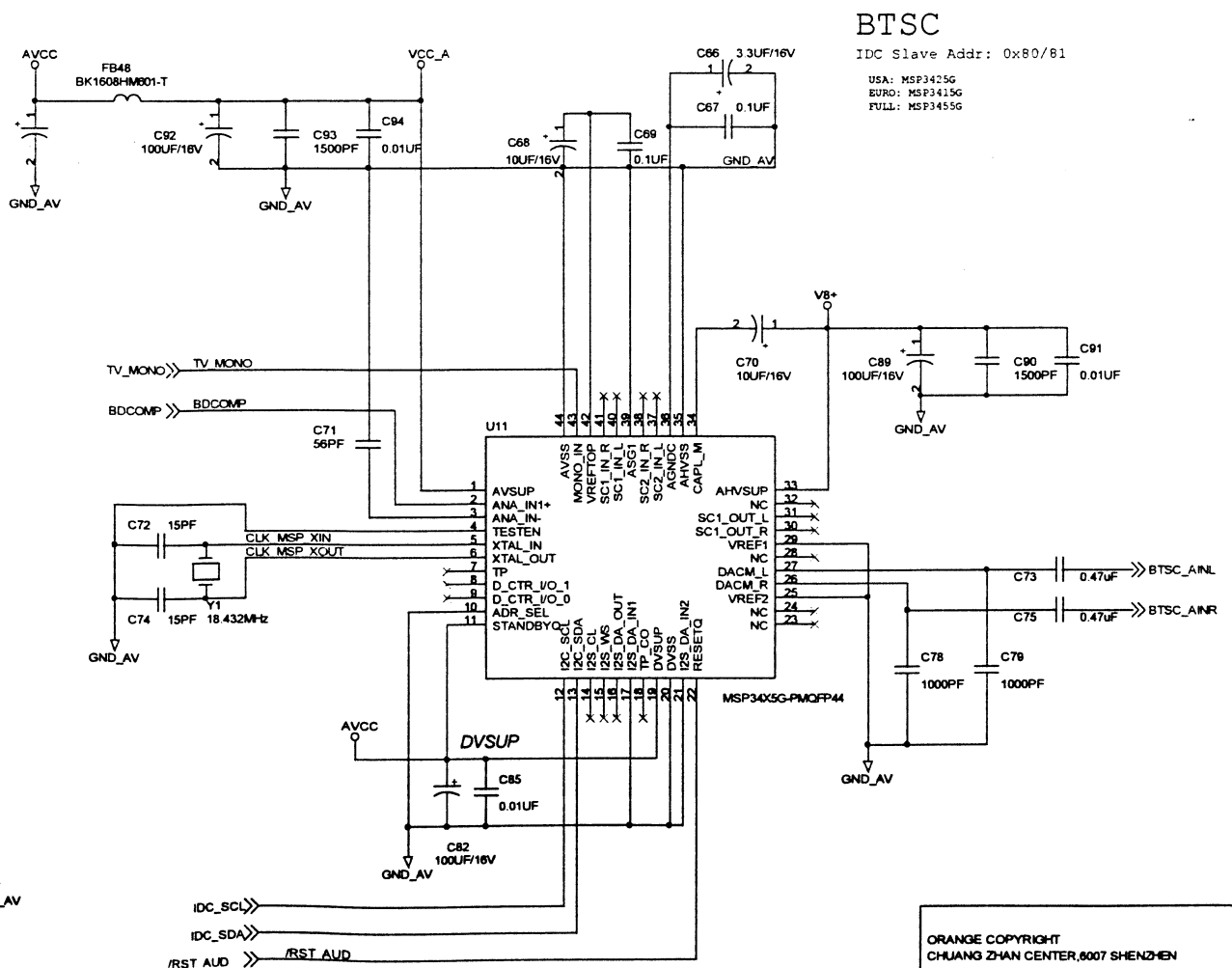
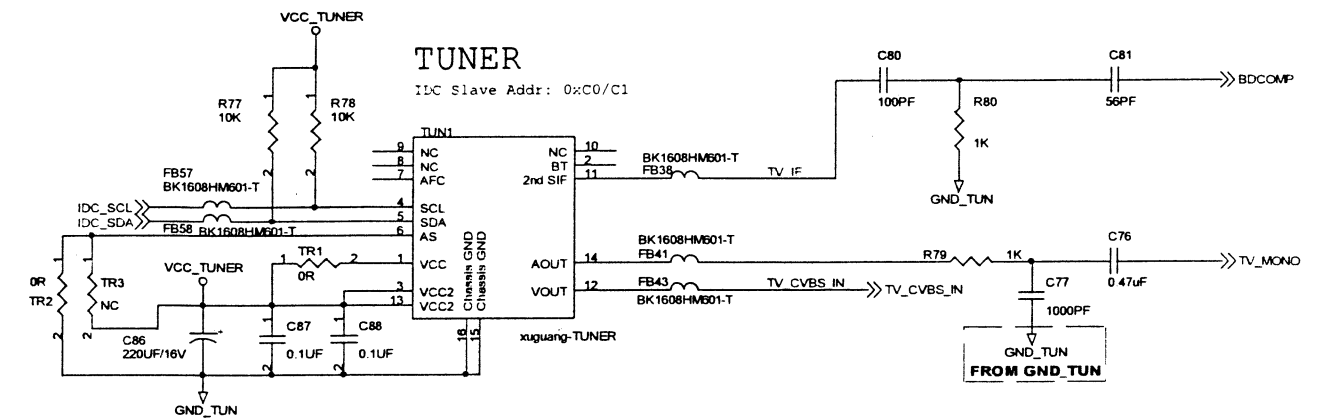
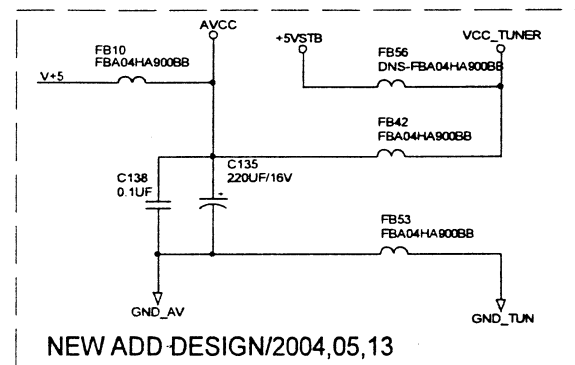
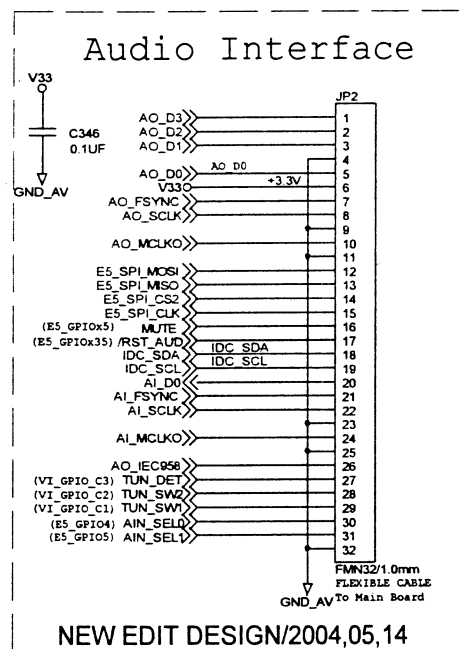
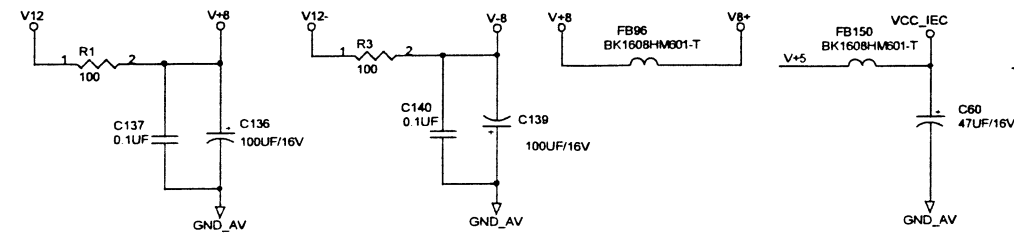
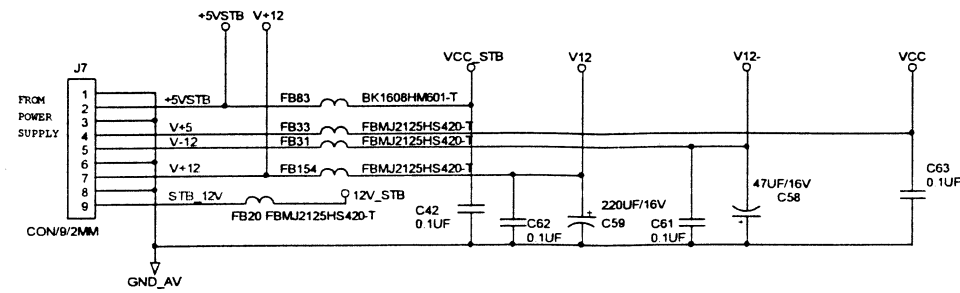


# AM5888S (AM5869S)



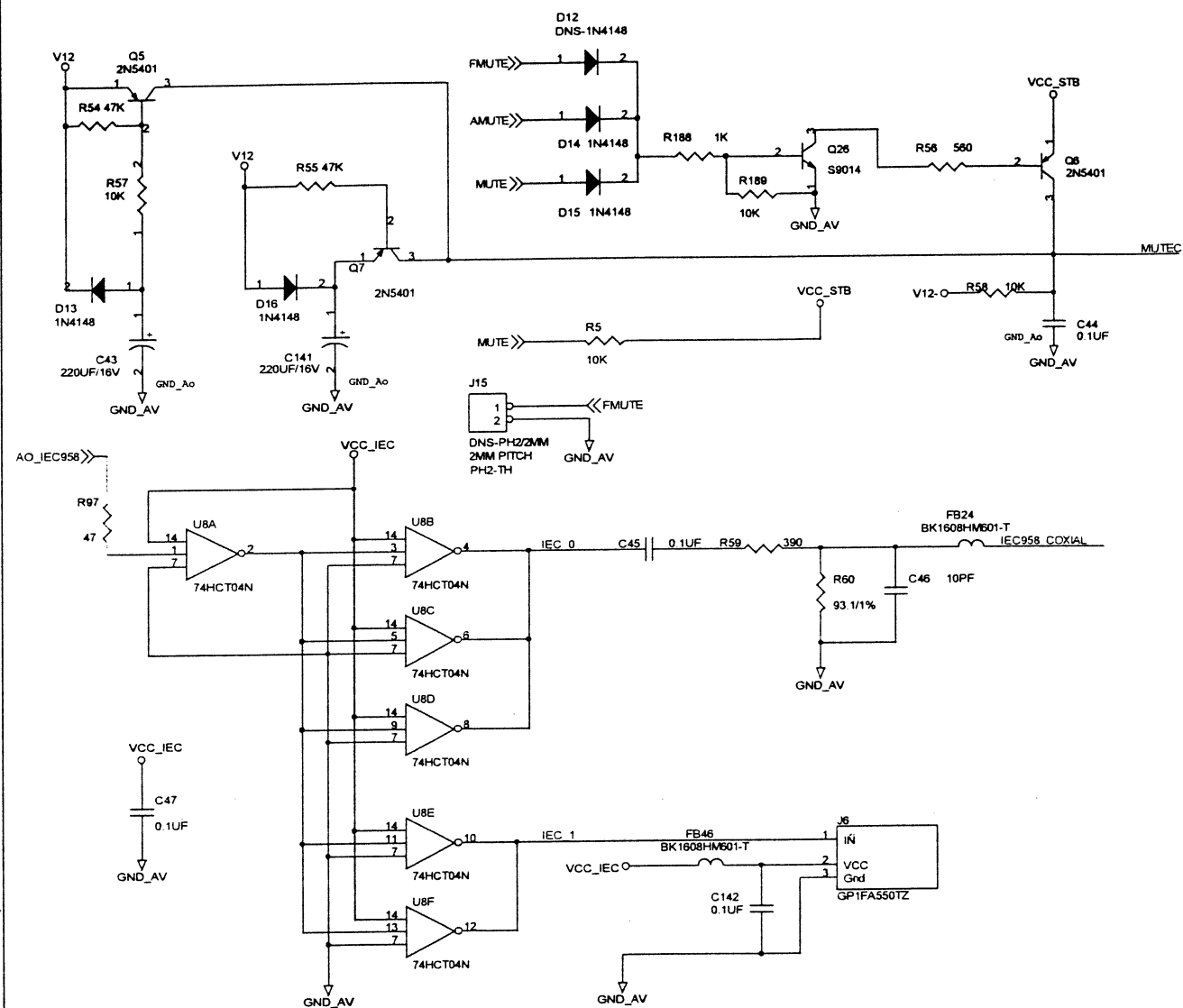
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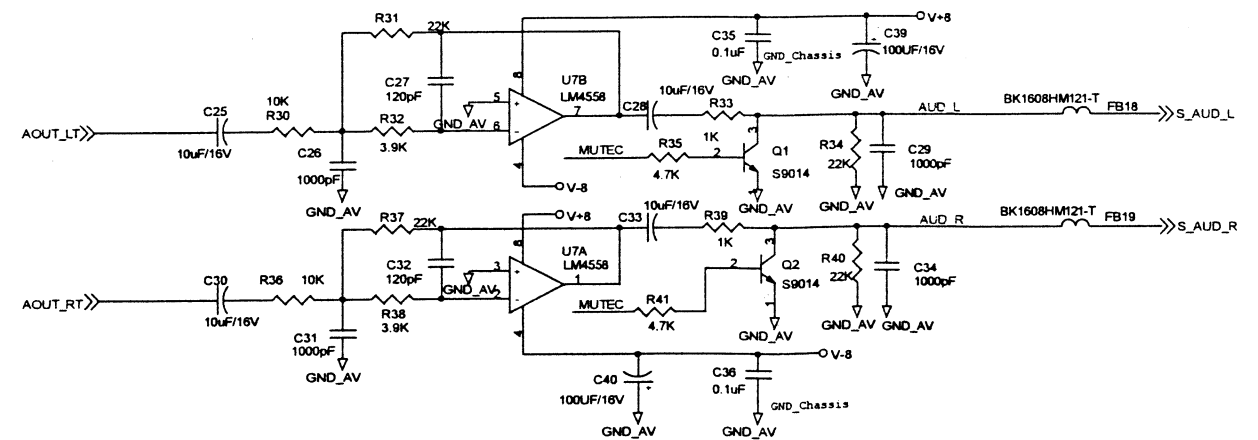
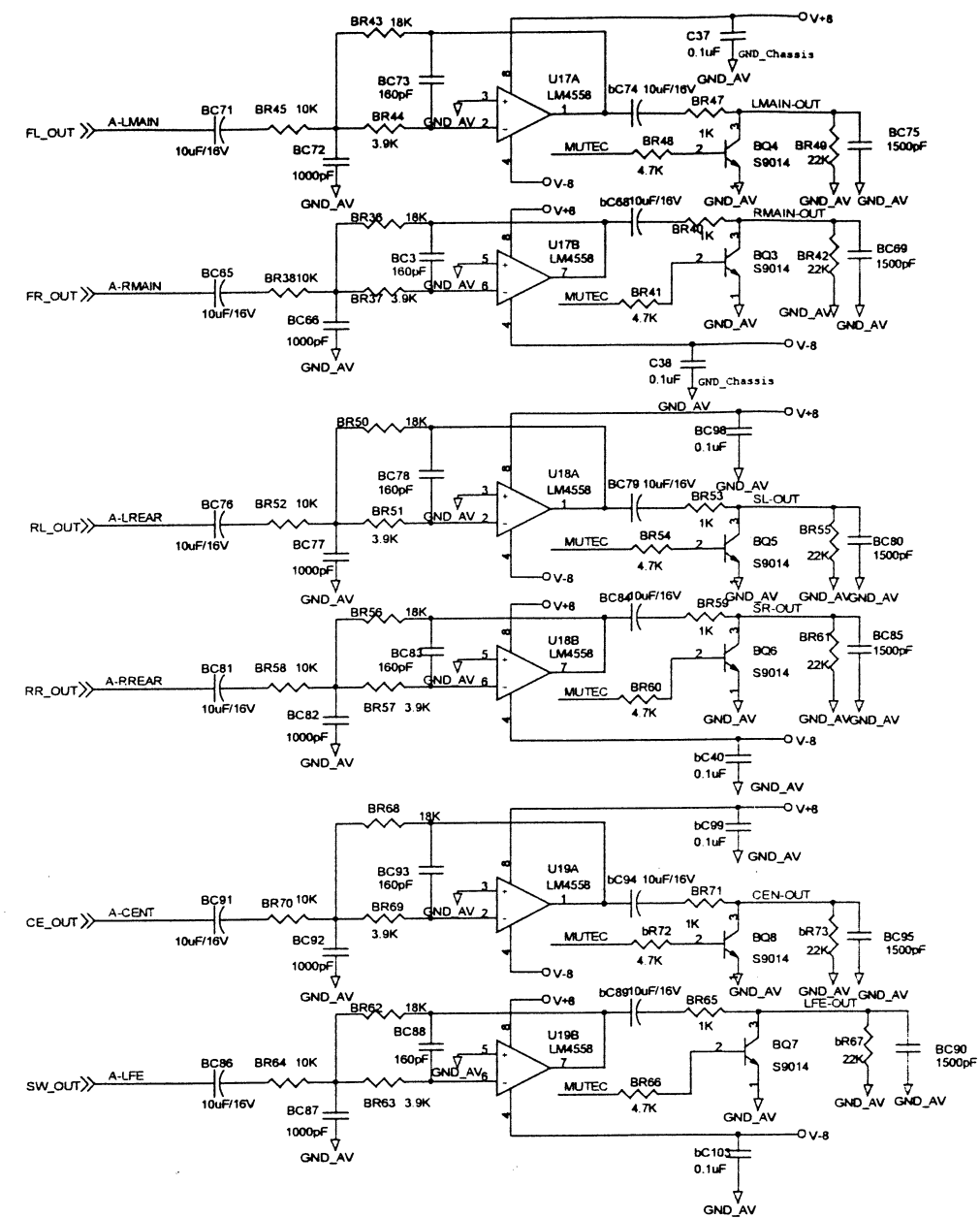
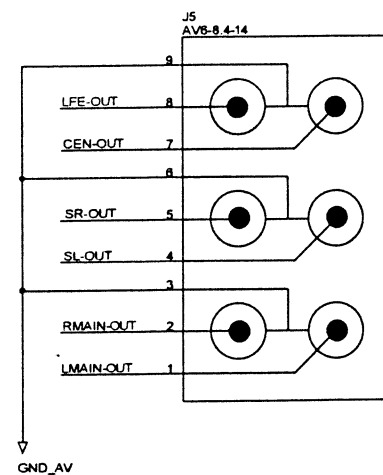
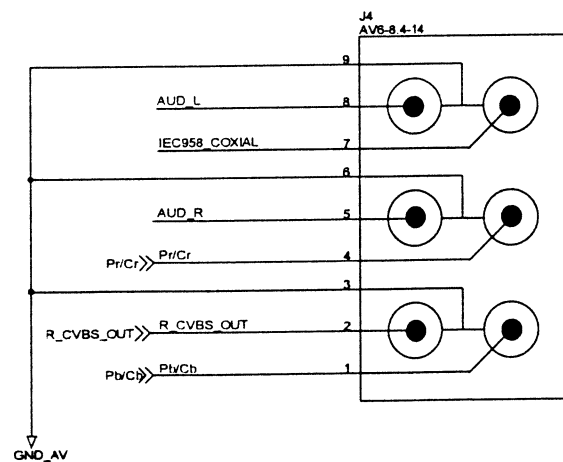


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Title			POWER, TUNER, BTSC & TUNER
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Digital Audio Out



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Title  
AUDIO OUT BUFFER

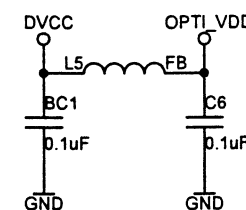
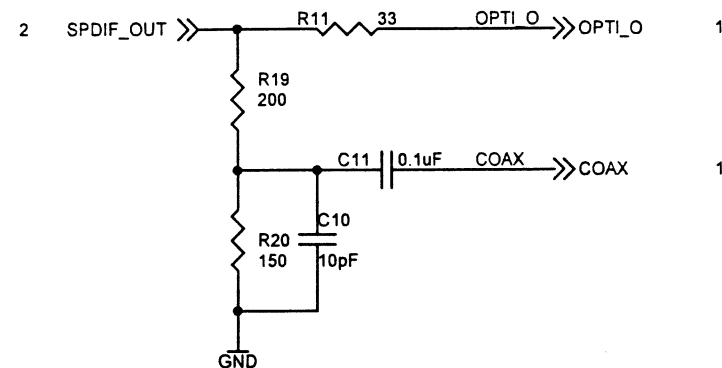
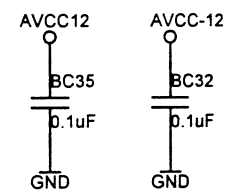
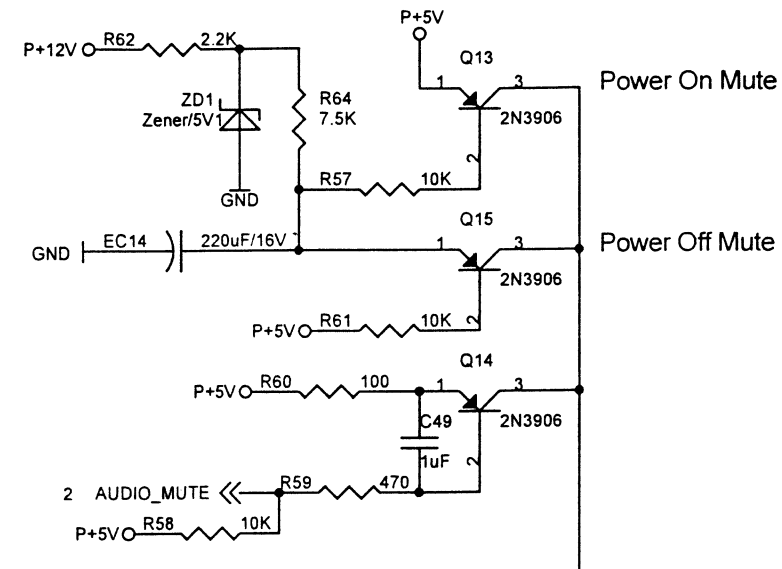
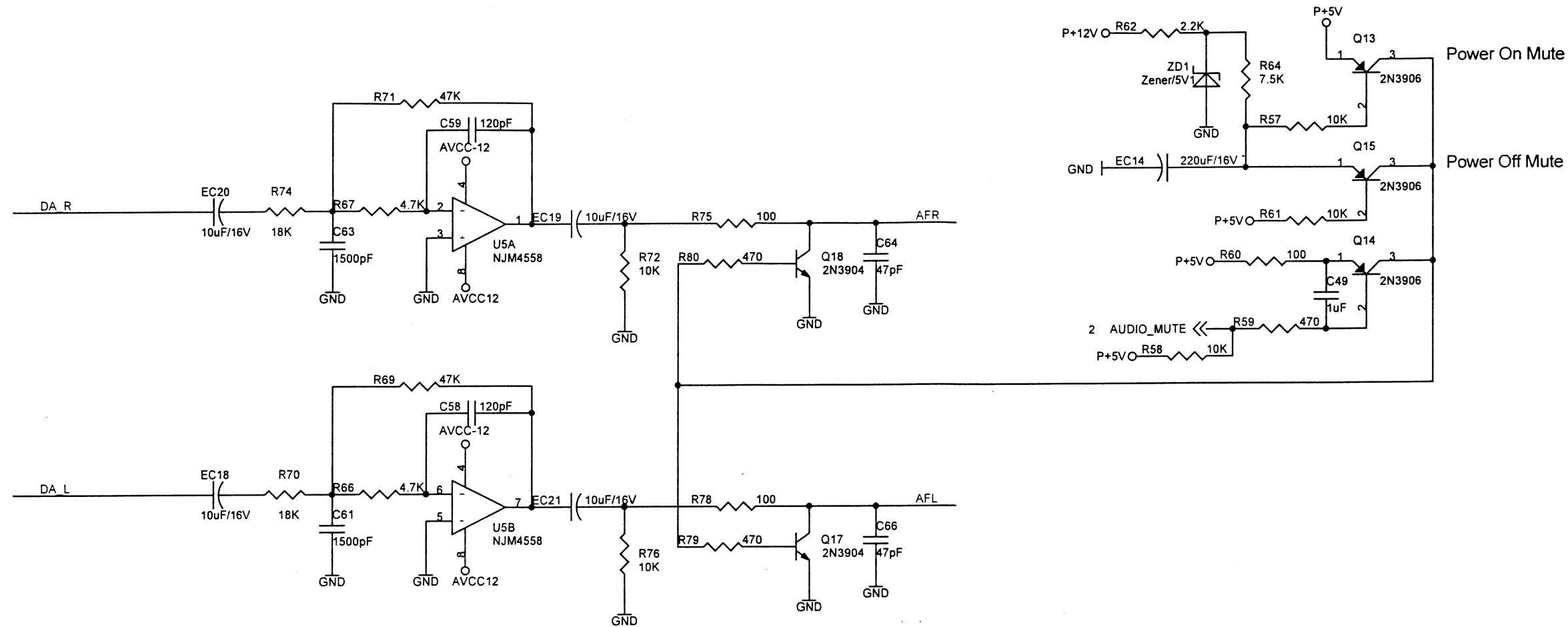
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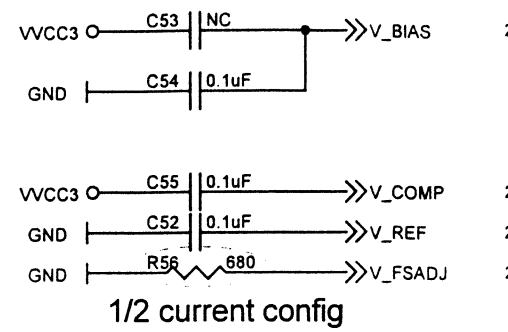
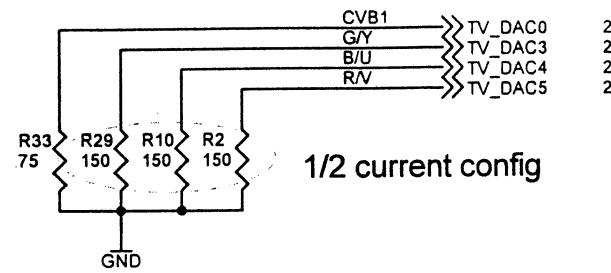






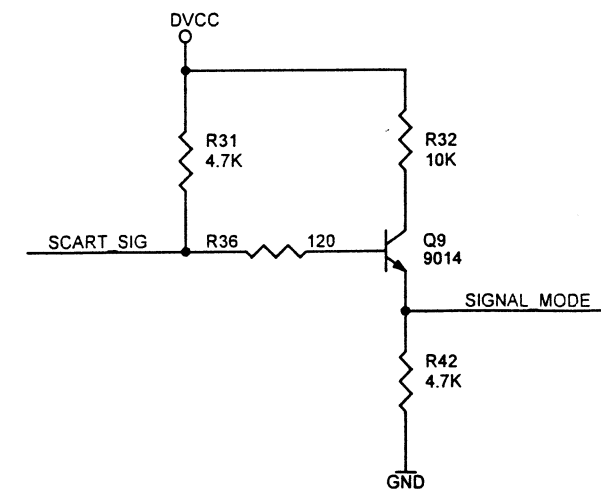
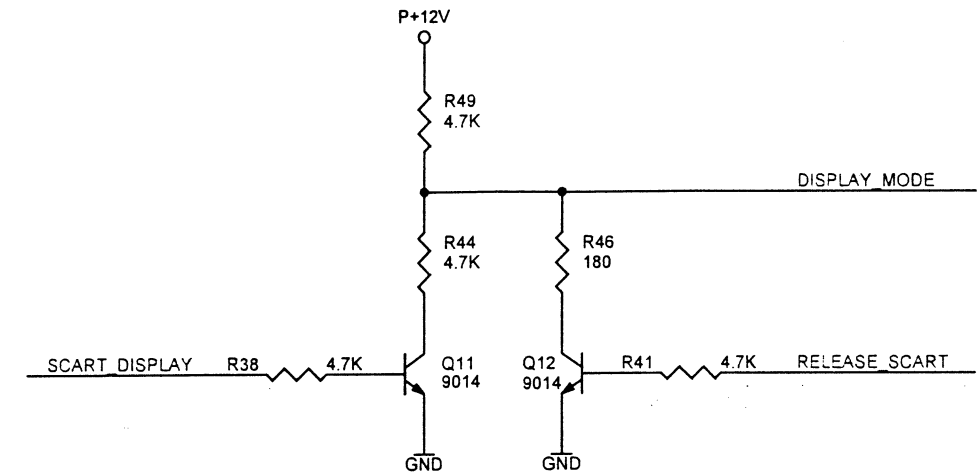
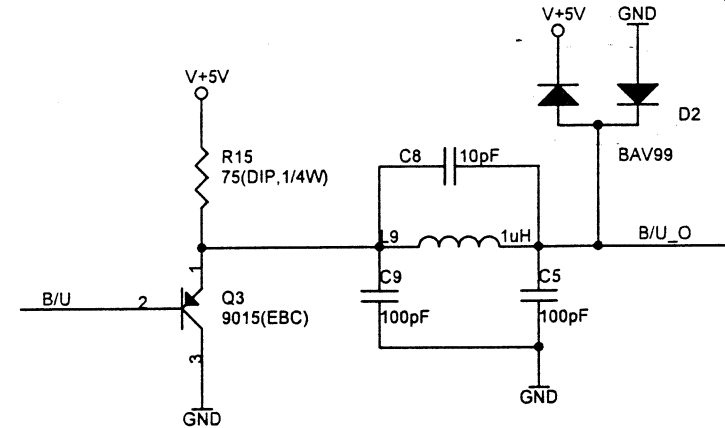
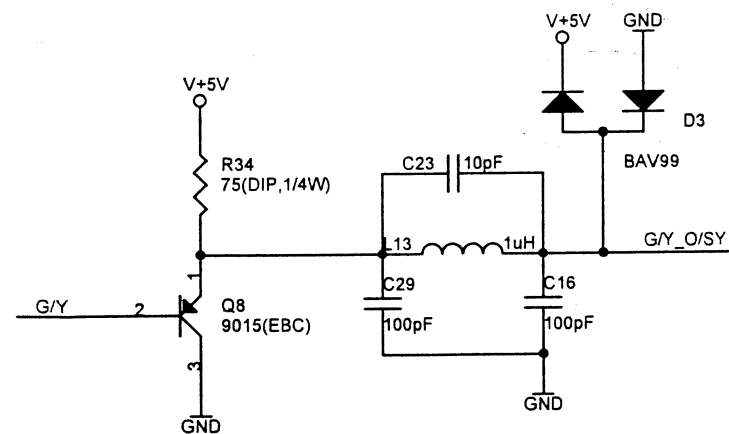
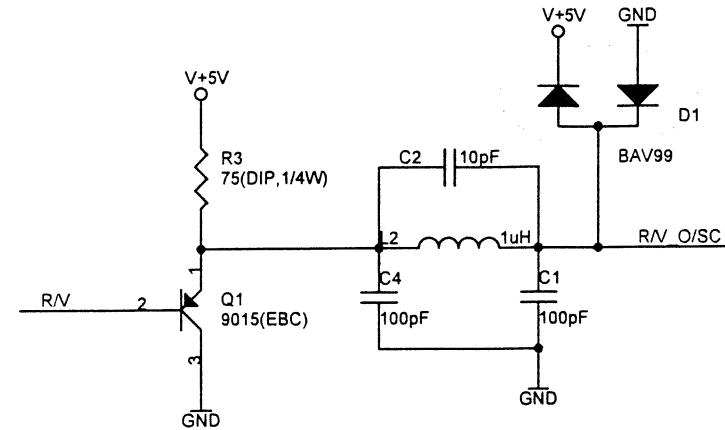
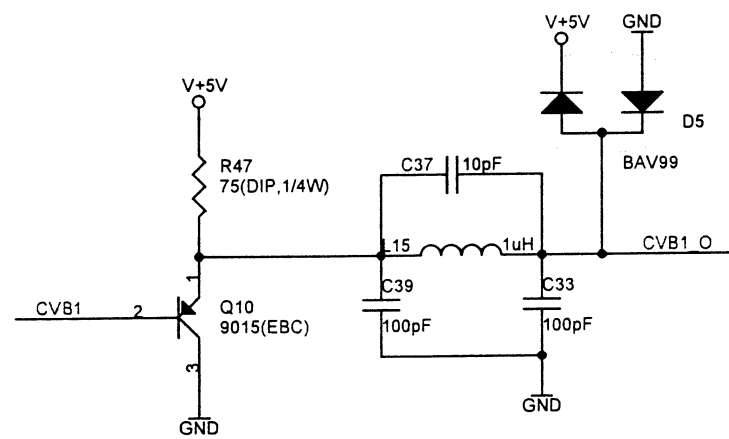
AFR	AFR	1
AFL	AFL	1
DA_L	DA_L	2
DA_R	DA_R	2

SUNPLUS TECHNOLOGY			
Title			
Audio Filter			
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TV0	TV3	TV4	TV5
CVB	Y	Cb	Cr
CVB	Y(S-Video)	CVB	C(S-Video)
CVB	G	B	R

VIDEO DAC	R94	R91	R92	R93
Full Current	390	75	75	75
Half Current	680	150	150	150



RELEASE_SCART	DISPLAY_MODE
0	Not RELEASE
1	RELEASE

SCART_DISPLAY	DISPLAY_MODE
0	12V(9.5V-12V 4:3)
1	6V(5V-8V 16:9)

SCART_SIG	SIGNAL_MODE
0	0V(CVBS)
1	3V(RGB)

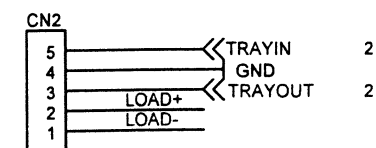
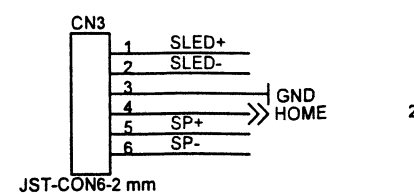
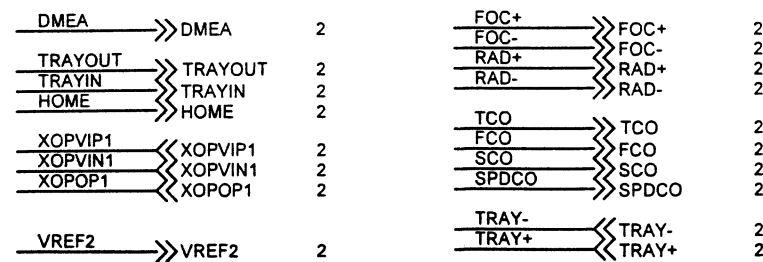
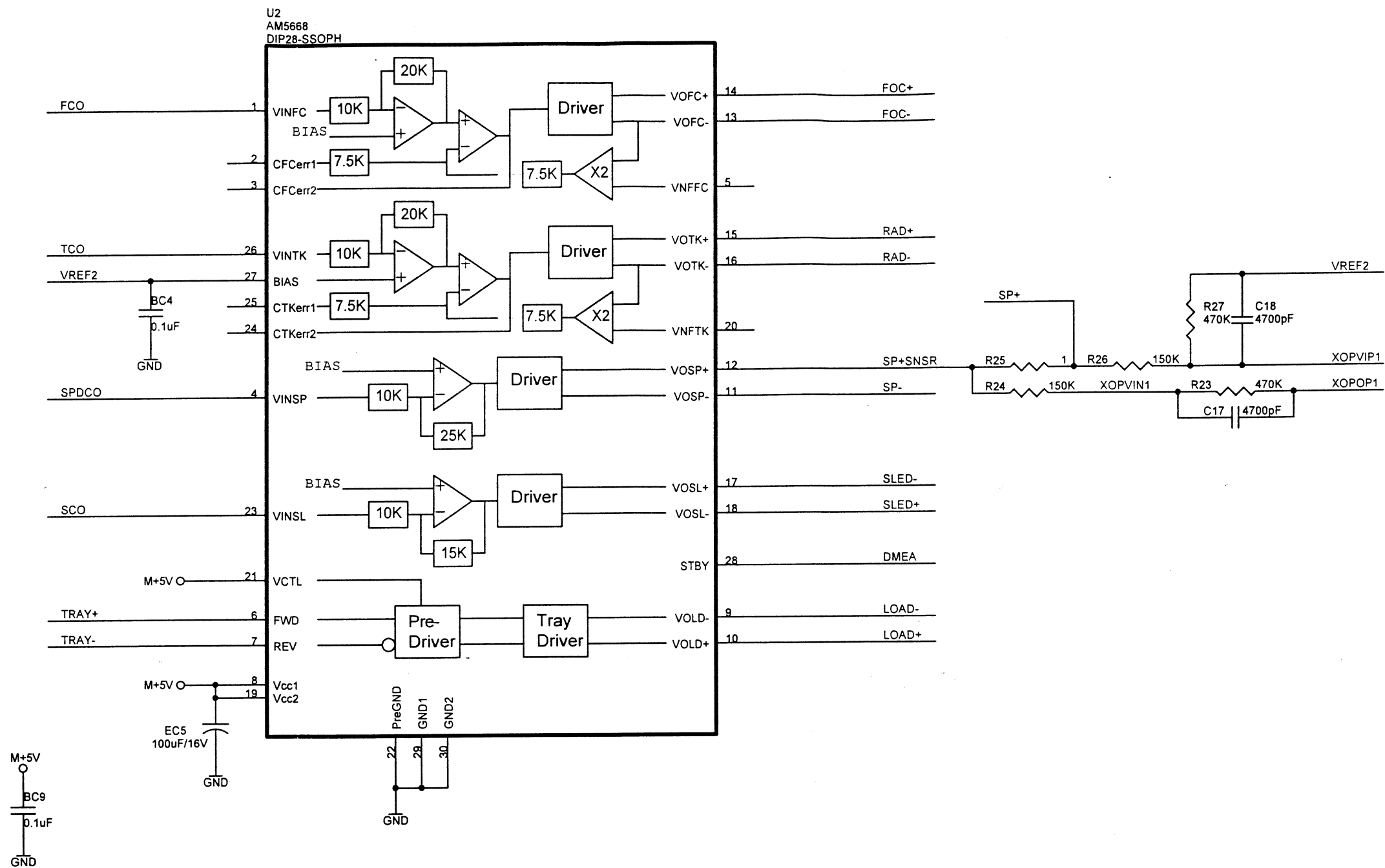
SCART\_SIG << SCART\_SIG 2  
SCART\_DISPLAY << SCART\_DISPLAY 2  
RELEASE\_SCART << RELEASE\_SCART 2

SIGNAL\_MODE << SIG\_MODE 1  
DISPLAY\_MODE << DIS\_MODE 1

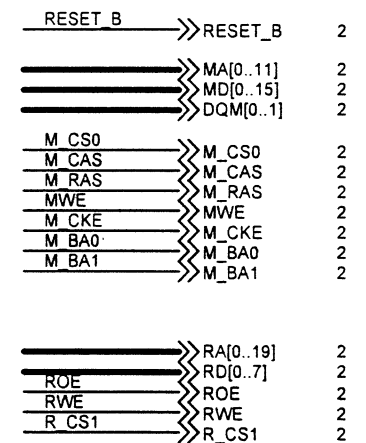
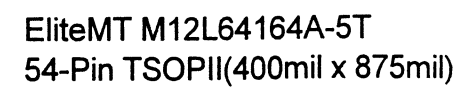
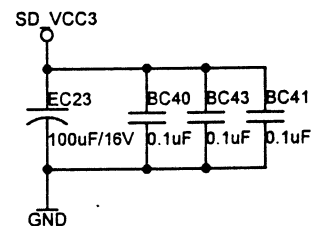
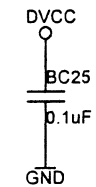
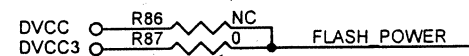
CVB1\_O << CVB1\_O 1  
G/Y\_O/SY << G/Y\_O 1  
Y\_O << Y\_O 1  
R/V\_O/SC << R/V\_O 1  
Cr\_O << Cr\_O 1  
B/U\_O << B/U\_O 1

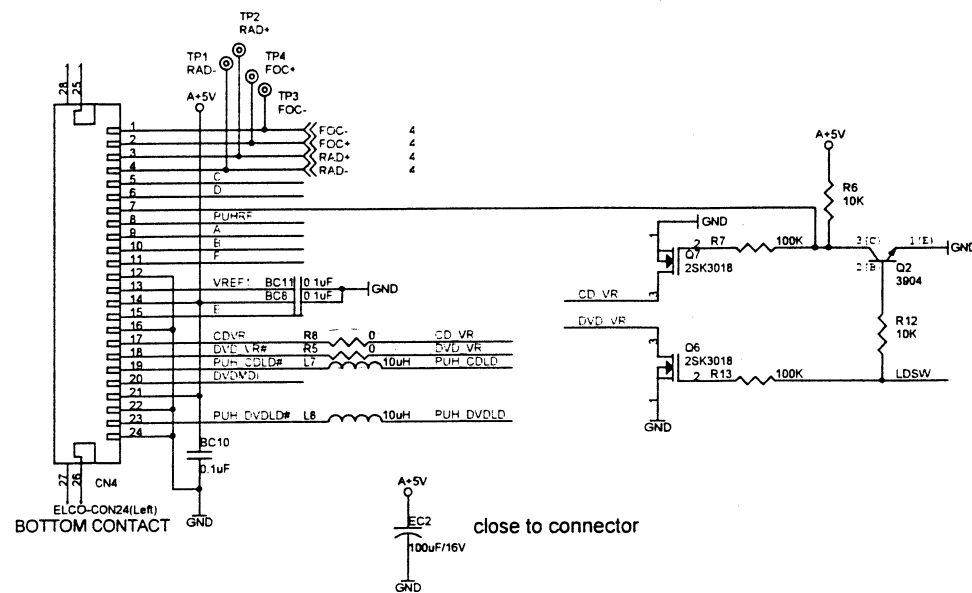
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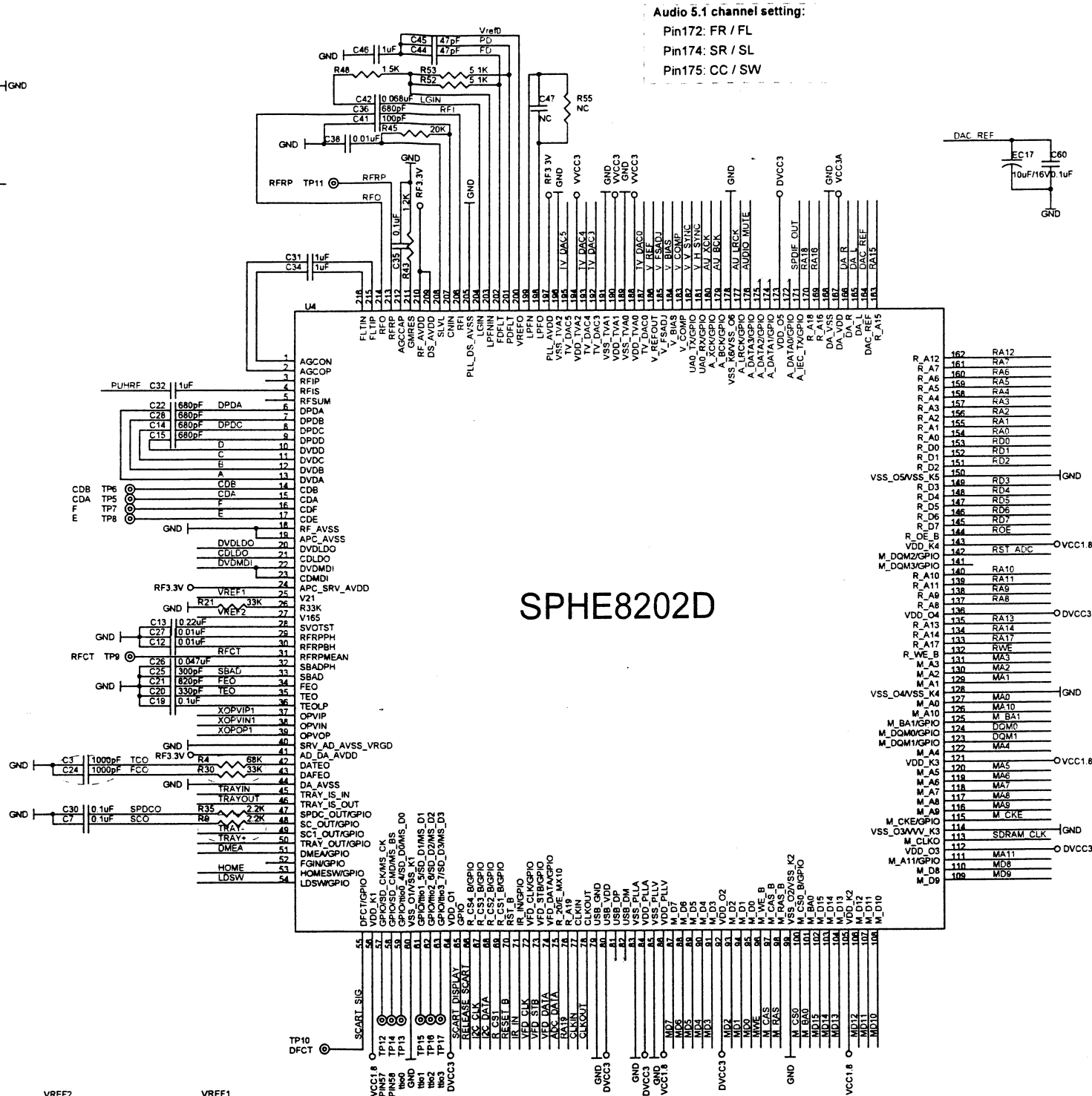
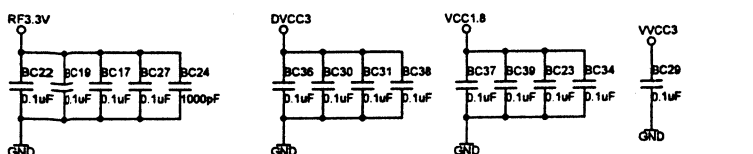
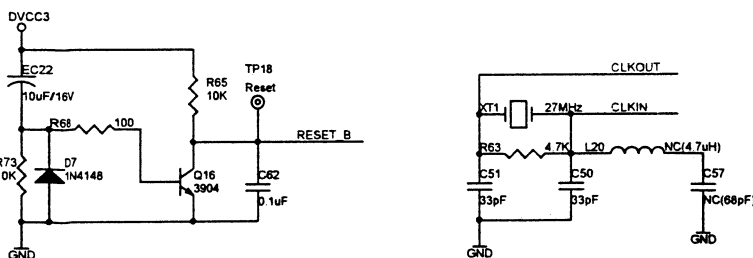
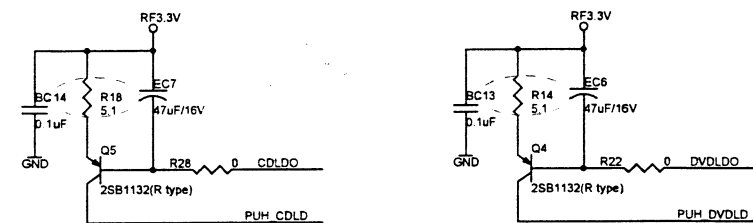


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Motor-Driver			
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Pickup head parameter						Motor Driver AM5668			
	R14	R18	R8	R5	R9	R30	C24	R4	C3
SONY	4.7	4.7	0	0	20K	24K	1000P	68K	1000P
HD65	5.1	5.1	0	0	2.2K	20K	1000P	91K	680P
HD62/60	5.1	5.1	0	0	2.2K	33K	1000P	68K	1000P
SAMSUNG	5.1	5.1	0	0	2.2K	12K	1500P	68K	1000P
Mitsumi	5.1	5.1	0	0	2.2K	12K	1500P	68K	1000P
Kenwood	5.1	5.1	0	0	4.7K	NOT SUPPORT AM5668 NOW			
Thomson	5.1	5.1	240	0	2.2K	NOT SUPPORT AM5668 NOW			



## SPHE8202D

### Card 3 in 1 setting:

Pin55: CARD\_RST  
Pin57: SD\_CLK / MS\_CLK  
Pin58: SD\_CMD / MS\_BS  
Pin59: SD\_D0 / MS\_D0  
Pin61: SD\_D1 / MS\_D1  
Pin62: SD\_D2 / MS\_D2  
Pin63: SD\_D3 / MS\_D3  
Pin65: CARD\_SENSE1  
Pin66: CARD\_SENSE2

### SCART GPIO SET:(when use Card 3in1)

Pin141: SCART\_SIG  
Pin142: RELEASE\_SCART(common exist with RST\_ADC)  
Pin 52: SCART\_DISPLAY

RAI0 19	3
RAI0 7	3
MDI0 15	3
MDI0 11	3
QMI0 1	3
ROE	3
RWE	3
R_CS1	3
M_CS0	3
M_CAS	3
M_RAS	3
M_BA0	3
M_BA1	3
M_CKE	3
SDRAM_CLK	3
TV_DAC5	5
TV_DAC3	5
TV_DAC0	5
TV_DAC2	5
V_BIAS	5
V_COMP	5
V_FSA0	5
V_V_SYNC	5
V_H_SYNC	1
SCART_SIG	5
SCART_DISPLAY	5
RELEASE_SCART	5
IC_DATA	3
IC_CLK	3
DA_L	6
DA_R	6
SPDIF_OUT	6
AUDIO_MUTE	6
IR_IN	1
VFD_CLK	1
VFD_DATA	1
VFD_STB	1
SPDCO	4
SCD	4
TRAY-	4
TRAY+	4
DMEA	4
HOME	4
TCO	4
FCO	4
VREF2	4
TRAYIN	4
TRAYOUT	4
XOPVIP1	4
XOPVIN1	4
XOPOP1	4
RESET_B	3
ADC_DATA	7
AU_LRCK	7
AU_BCK	7
AU_XCK	7
RST_ADC	7

### SUNPLUS TECHNOLOGY

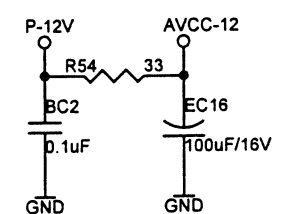
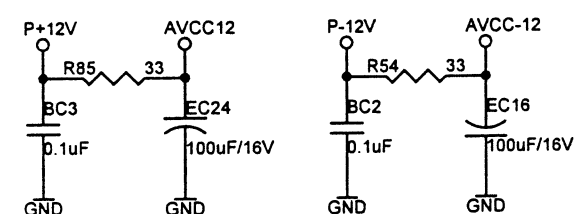
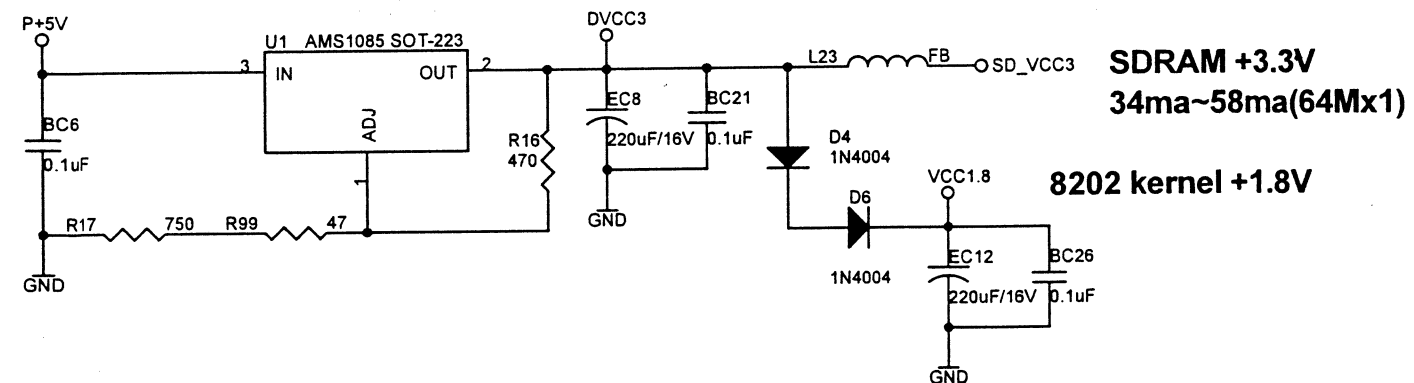
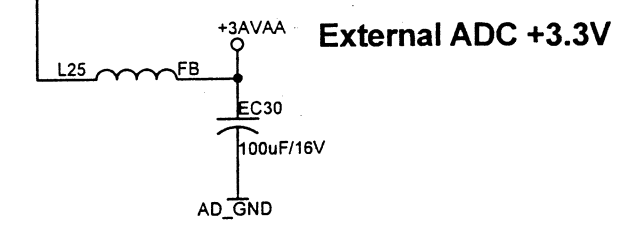
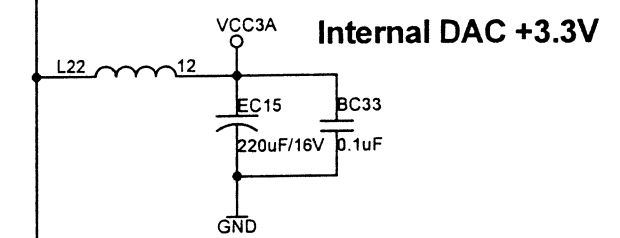
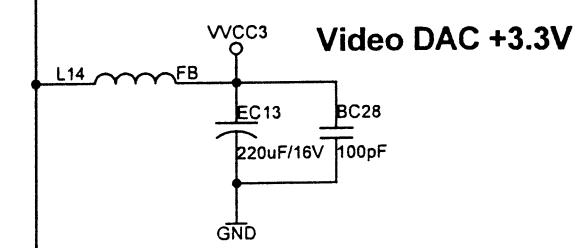
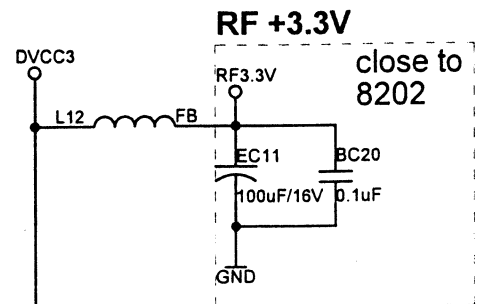
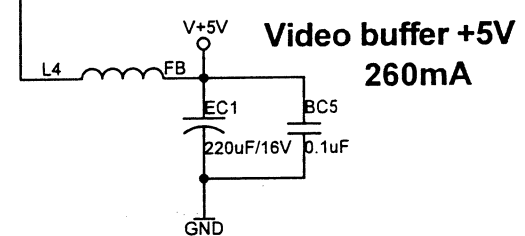
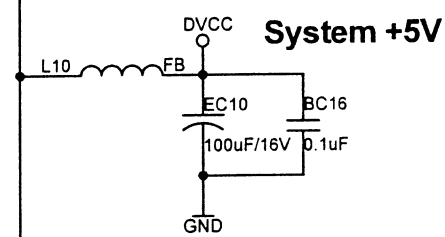
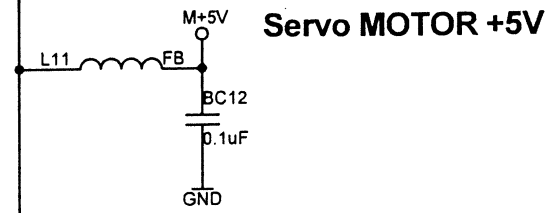
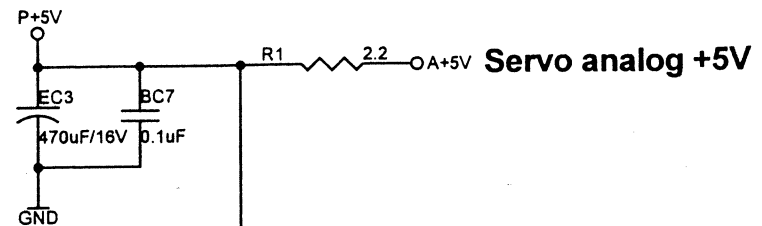
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8202D-16-SY-216-EXTAD-01

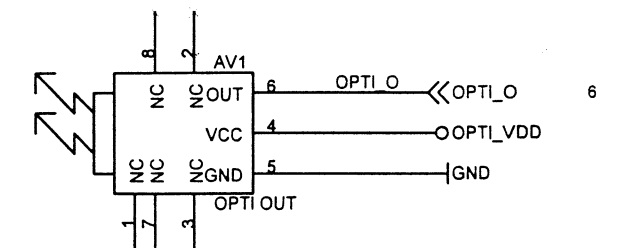
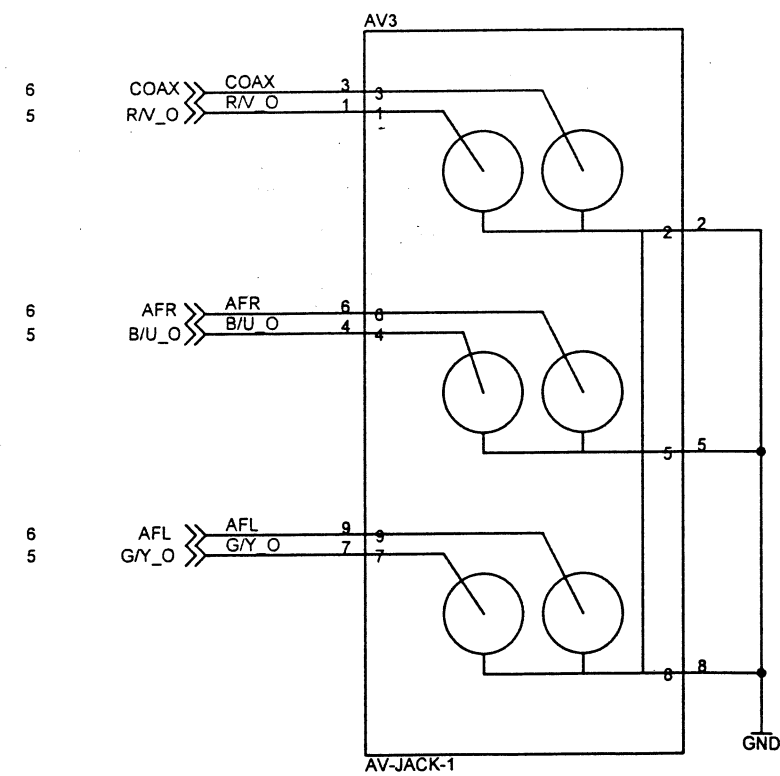
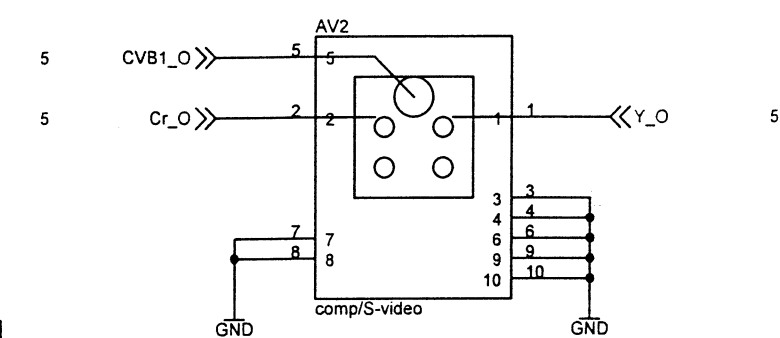
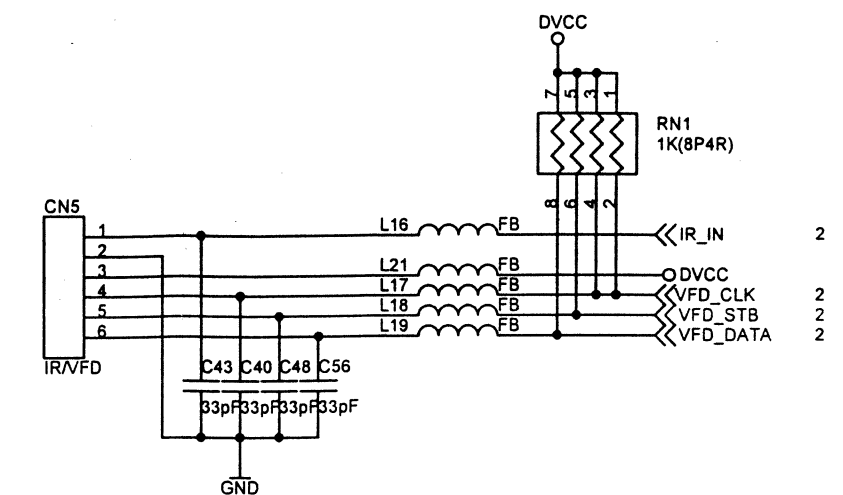
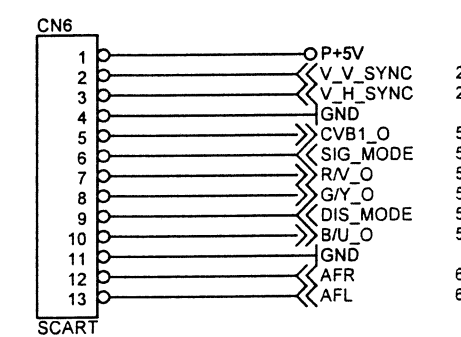
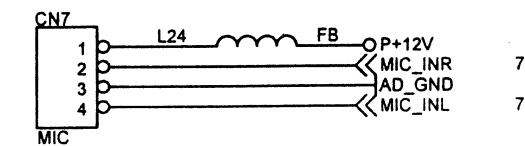
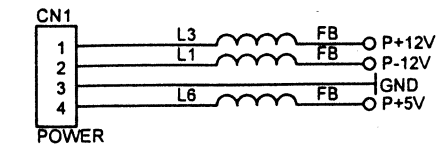
Thursday, September 29, 2005

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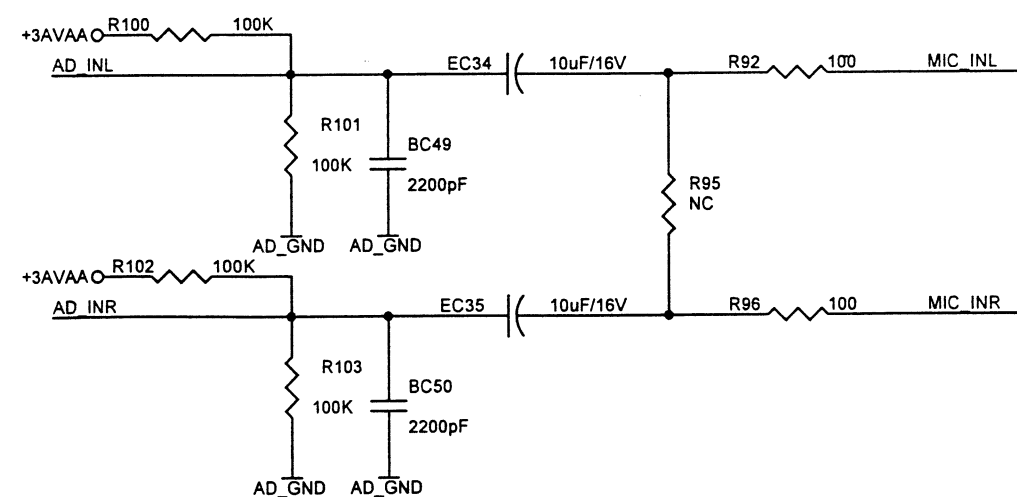
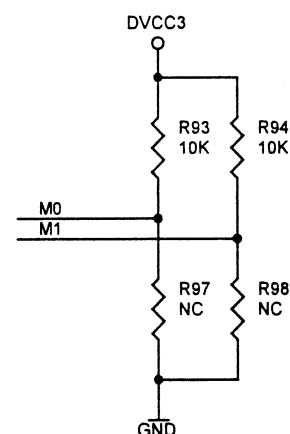
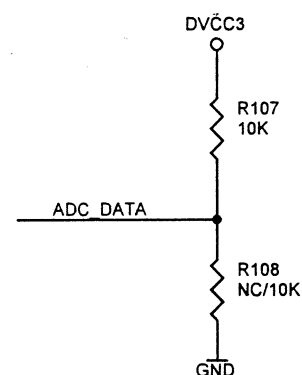
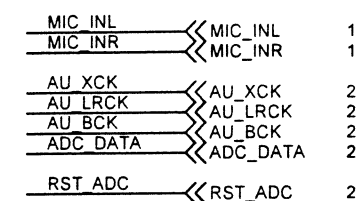
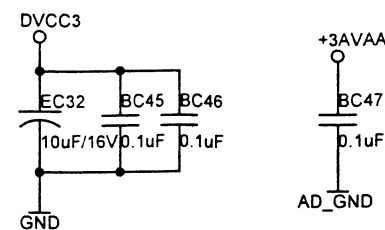
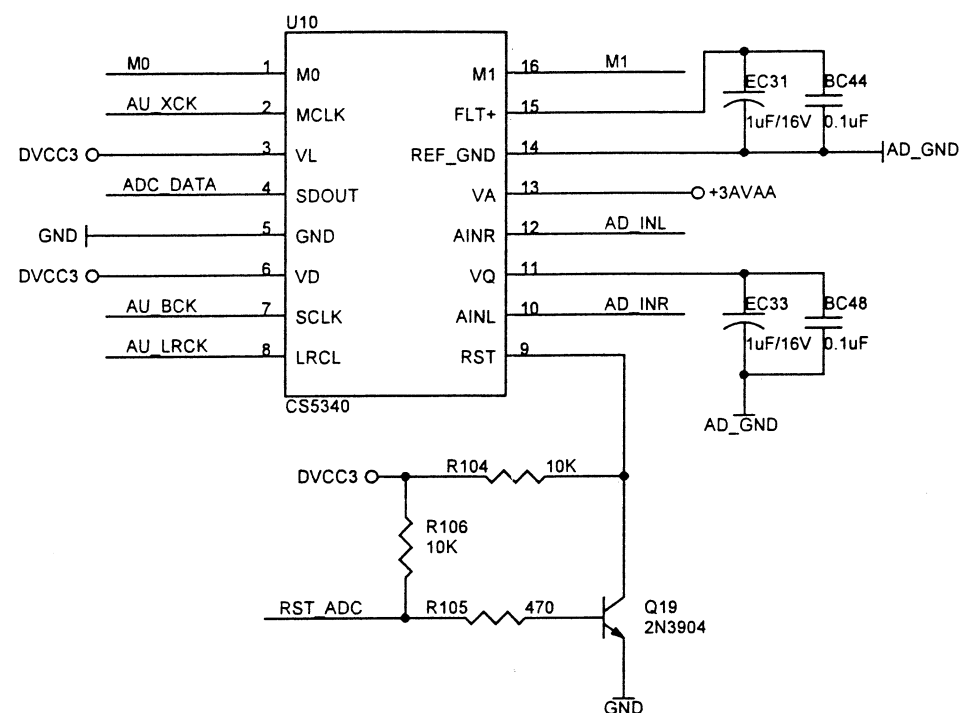


Power Bead > 2A, RAC@100 MHz  
= 70 ohm, RDC(max)= 0.4 ohm



SUNPLUS TECHNOLOGY			
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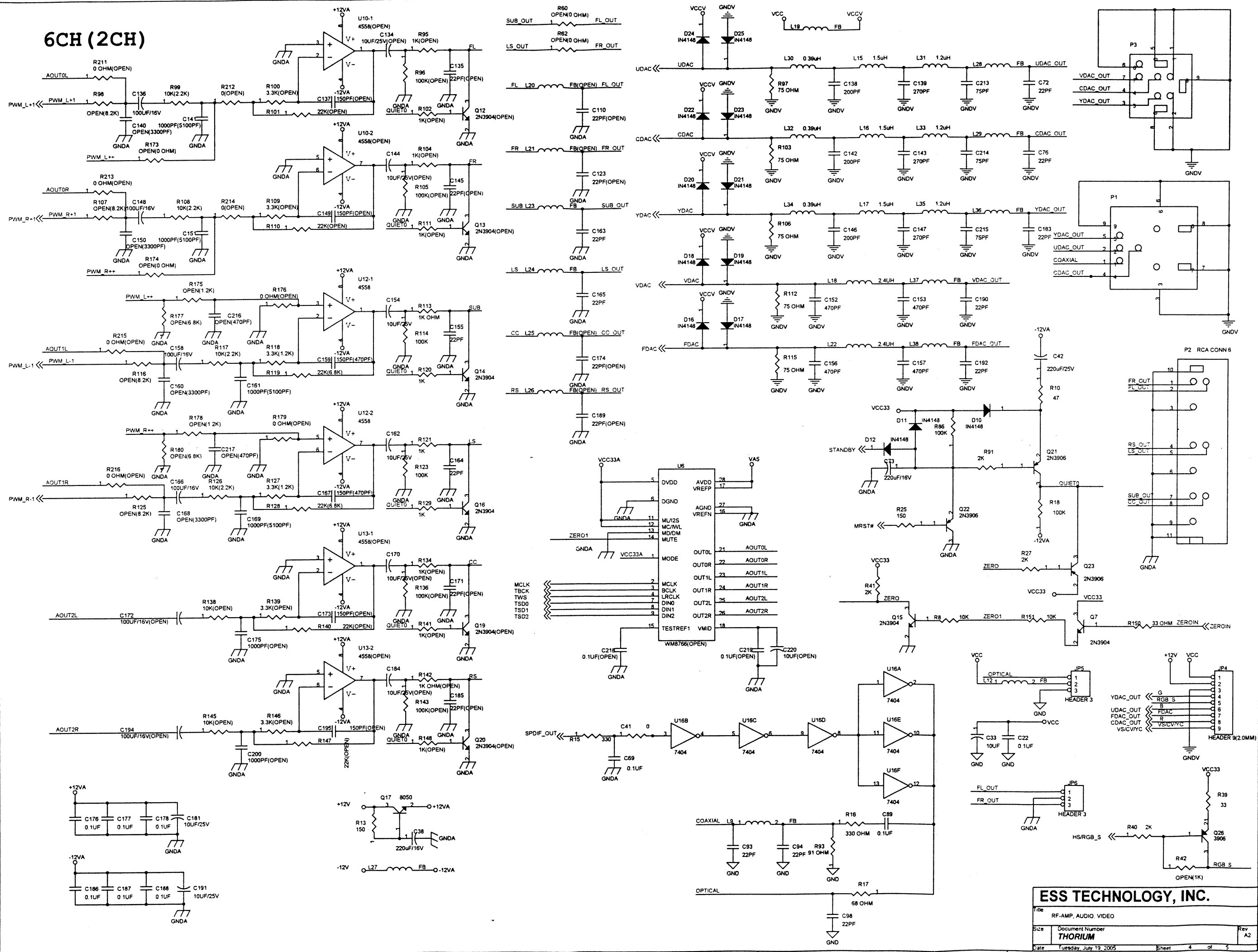


R107	R108	FORMAT
10K	NC	I2S
NC	10K	left justified

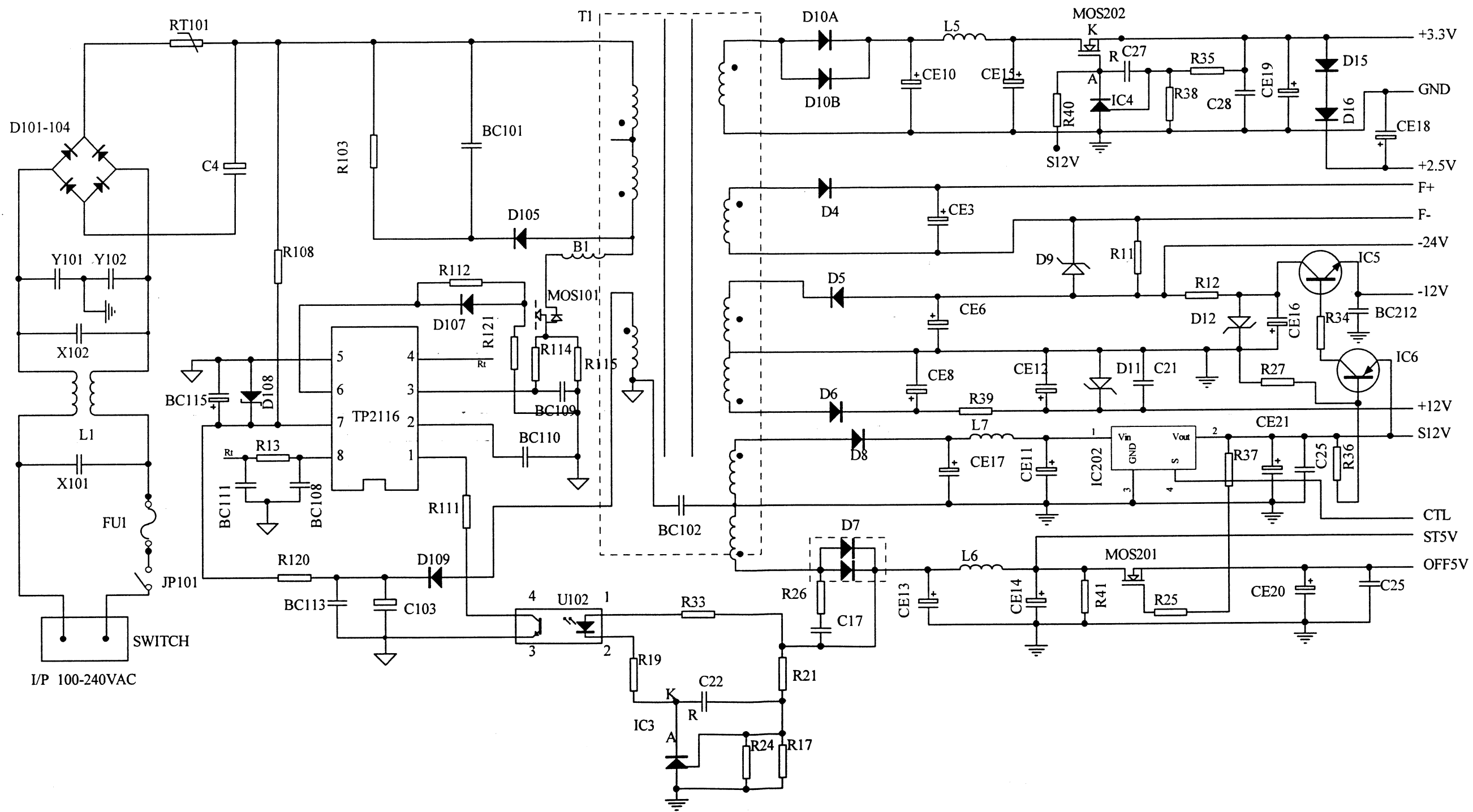
M1	M0	MODE
0	0	Clock Master, Single Speed Mode
0	1	Clock Master, Double Speed Mode
1	0	Clock Master, Quad Speed Mode
1	1	Clock Slave, All Speed Modes

SUNPLUS TECHNOLOGY		
Title External ADC		
Size B	Document Number 8202D-16-SY-216-EXTAD-0-I	Rev 1.0
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# 6CH (2CH)



## POW853F原理图



Title			
TOPOW ELECTRONIC CO.,LTD			
Size	Number	Revision	
A3	POW853F原理图		
Date:	23-Sep-2005	Sheet of	
File:	D:\11111111111111111111新建文件夹\电源机\POW853F\POW853F新建文件夹\pow853f.sch DDB		

Manta DVD011 Emperior3 nr płyty ODT22A z układem 8pin, nóżki 1 do 4 połączone razem.

Trzeba wymienić:

1. IC 102 transoptor typowy np Sharp TOM-ELEKTRON z gieldy
2. IC 101 Viper-22A TOM-ELEKTRON z gieldy
3. C104 47nF ceramiczny
4. C102 47uf/400V 105 st C

**koniecznie wszystkie wymienić!!!!!!!!!!!!!!**